

## A New Genus of Pentatominae from South America, Distinguished by the Position of Its Spiracles (Hemiptera: Pentatomidae)

L. H. ROLSTON

DEPARTMENT OF ENTOMOLOGY, LOUISIANA STATE UNIVERSITY,  
BATON ROUGE, LOUISIANA 70803

RECEIVED FOR PUBLICATION NOVEMBER 30, 1973

**Abstract:** *Caonabo*, new genus, and *C. casicus*, new species, are described from Brazil. In this genus the spiracles are located near the lateral margins of the abdomen, while the paired trichobothria associated with each spiracle remain in a submarginal position. The spatial relationship of the spiracles and trichobothria appears unique among genera of Pentatominae.

### INTRODUCTION

This new genus is apparently unique among members of Pentatominae in having the spiracles located near the lateral margin of the abdominal sternites while the paired trichobothria are caudad and mesad of each spiracle in the submarginal position usual for the subfamily. A similar spatial relationship between the trichobothria and spiracles exists in several pentatomoid families (Acanthosomatidae, Dinidoridae, Tessaratomidae, and Urostylidae) but among pentatomids only in Phyllocephalinae according to Ruckes (1962).

#### *Caonabo*, n. g.

Juga and tylus subequal in length; antennae five-segmented, basal segment not surpassing apex of head; bucculae moderately developed, weakly toothed at anterior limit, then percurrent, terminating truncately at base of head near distal end of first rostral segment. Anterolateral margins of pronotum rounded vertically, anterior angles contiguous with eyes. Frena extending along basal half of scutellum. Costal angles of coria surpassing apex of scutellum.

Prosternum and metasternum nearly flat; median low carina on mesosternum diminishing posteriorly to obscurity. Metathoracic ostiole auriculate. Femora unarmed, tibiae weakly sulcate on superior surface, tarsi three-segmented. Spiracles located near lateral margin on second through fifth visible abdominal sternites, laterad and cephalad of paired trichobothria, these somewhat diagonally transverse with one trichobothrium entad and cephalad of other (Fig. 2). Abdomen lacking median tubercle or spine.

Male with one pair of lateroventral thecal appendages and greatly developed median penal lobes (Figs. 4 to 6).

Type species: *Caonabo casicus*, new species.

#### *Caonabo casicus*, n. sp.

Light brown to castaneous above, generally grading to black on humeri, brownish yellow beneath; occasionally entirely fuscous or black. Length of body, 7.4 to 10.7 mm.

Head usually slightly longer than wide across eyes, 1.6 to 1.9 mm wide, 1.7 to 2.1 mm long. Lateral margins weakly concave above antenniferous tubercles, strongly elevated

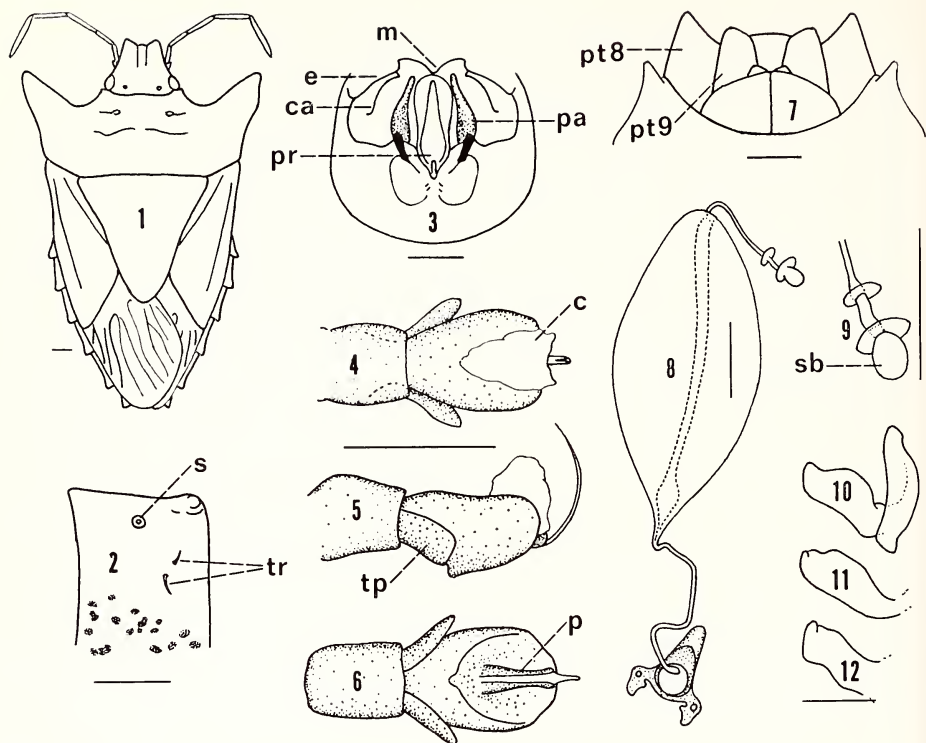


FIG. 1. Dorsal aspect, female. FIG. 2. Lateral margin of abdominal sternite; spiracle (s); trichobothrium (tr). FIG. 3. Pygophore, dorsal aspect; carina (ca); elevated margin of genital cup (e); median process (m); paramere (pa); proctiger (pr). FIG. 4. Theca and related structures, dorsal aspect; conjunctiva (c). FIG. 5. Same, lateral aspect; thecal process (tp). FIG. 6. Same, ventral aspect; penisfilum (p). FIG. 7. Genital plates; 8th paratergite (pt 8); 9th paratergite (pt 9). FIG. 8. Spermatheca. FIG. 9. Distal portion of spermatheca; spermathecal bulb (sb). FIGS. 10 to 12. Variations in right paramere.

Dimensional lines equal 0.5 mm.

toward apex. Juga usually a little shorter than tylus, each jugum and tylus separately rounded at apex. Punctuation moderately strong and rather uniformly arranged, entirely fuscous or with castaneous to concolorous punctures on and about tylus and vertex. Antennae uniformly yellowish brown to pale castaneous; basal two segments subequal in length, next two segments each about twice as long as basal segment, distal segment longest; length of segments, 0.4 to 0.6; 0.5 to 0.6; 0.8 to 1.0; 0.9 to 1.0; 1.2 to 1.4 mm. Apex of rostrum usually falling between mesocoxae and metacoxae, occasionally shorter, not surpassing mesocoxae, or longer, reaching between metacoxae

Humeri strongly produced, subacute to acute, somewhat elevated, directed obliquely forward (Fig. 1). Anterolateral pronotal margins concave from dorsal view, rough but not crenulate, usually slightly tuberculate at anterior angles; posterolateral margins convex, rough, usually pale. Disk traversed by strong ruga about midway between base and apex. Cicatrices indistinct, their posterior margin delineated by a transverse ruga swollen on each

side of meson into an irregular callous, this often accented posteriorly by a dense patch of black punctures. Punctuation stronger than on head, ranging from dark brown to black, coalescing into irregular lines on humeri. Width across humeri, 4.9 to 6.0 mm, length at meson, 1.9 to 2.5 mm.

Scutellum usually a little longer than wide at base, 2.6 to 3.3 mm wide; sides weakly concave. A small pale callous, indifferently to clearly delineated, present in basal angles. Disk often rough, sometimes with submarginal impressions converging beyond distal end of frena. Punctuation as strong as on pronotum, many punctures forming short irregular lines on basal disk.

Coria more finely and regularly punctate than scutellum; posterior margin extending posterolaterad in slight arc from scutellum; membrane frosty, venation weakly differentiated. Connexiva moderately exposed, black with border of each segment draped in brownish yellow; posterior angle of each segment markedly produced, resulting in strongly serrate connexival margin.

Punctuation beneath humeri especially dense, strong, black, continuing as submarginal band along thorax and along abdomen mesad of trichobothria (Fig. 2); punctuation in broad marginal band on abdomen concolorous, shallow, dense, with trichobothria located about midway in this band; punctuation elsewhere on head, thorax, and disk of abdomen mostly black, moderately dense, variable in size, irregular in distribution. Evaporatorium on each side rugose, extending from between coxae laterad about halfway from orifice to lateral margin of metapleuron.

A segment of anterior margin of genital cup elevated on each side of median process; entad of this segment a carina running along lateral wall; posterior margin of genital cup produced on each side as short oblique process located caudad of parameres and cephalad of large impression in broad posterior border of pygophore (Fig. 3). Proctiger longitudinally impressed, elevated at distal extremity as pale median crest, this semicircular from lateral view. Distal portion of parameres variable in form (Figs. 10 to 12). A pair of thecal appendages located ventrolaterally (Figs. 4 to 6). Median penal lobes longer and wider than theca, without a discernible division. Penisfilum lying on median plane, pigmented basally except along midline, flagellate and hyaline distally. Conjunctiva with median lobe.

Apical angles of 8th paratergite acute, narrowly rounded (Fig. 7); 9th paratergite longitudinally impressed, deeply so toward base; spermathecal bulb ovoid (Figs. 8 and 9).

*Types.* Holotype, male, labeled Museum Leiden, Nova Friburgo, Estado do Rio, 900 m. 1-1946, Wygodzinsky. Deposited in Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands.

*Paratypes.* 9 males, 5 females. Same data as holotype (2 ♂♂, ♀ Rijksmuseum); Viçosa, Minas Gerais, Brazil, 25-IV-33, E. J. Hambleton (♂ U. S. Nat. Mus.); (a) Rio Vermelho, S. Cath., Brazil, Apr. 1947; (b) A. Maller Coll., Frank Johnson, Donor (♂, ♀ Am. Mus. Nat. Hist.); Cacador, S. Catarina (♂ authors coll.); 12.2.73 Paraná, Bocaíuva do Sul (♂ Univ. Fed. do Paraná); (a) Stieglmayr, Rio Gr. do Sul; (b) Brit. Mus. 1955-16 (3 ♂♂, 3 ♀♀ Brit. Mus. Nat. Hist.).

*Distribution.* Brazil, in states of Rio Grande do Sul, Santa Catarina, Paraná, Rio de Janeiro, and Minas Gerais.

#### DISCUSSION

*Caonabo* seems related to a South American species group, currently placed in the genus *Euschistus*, whose members have a pair of lateral appendages on the aedeagus. In at least some species of this group the conjunctiva is eversible

and the appendages clearly pertain to this structure rather than arising on or near the posterior margin of the theca as elsewhere in this and neighboring genera. In *Caonabo* the conjunctiva is not eversible but the appendages arise within the theca, their origin, whether on the theca or on the conjunctiva, obscure. If these conjunctival and thecal appendages are homologous, *Caonabo* may represent a transitory stage from the former to the latter condition.

**Acknowledgments:** Messr. W. R. Dolling of the British Museum (Natural History), R. C. Froeschner of the United States National Museum, A. R. Panizzi of the Universidade Federal do Paraná, P. H. van Doesburg of the Rijksmuseum van Natuurlijke Historie, and P. Wygodzinsky of the American Museum of Natural History loaned the specimens upon which these descriptions are based.

#### Literature Cited

- RUCKES, H. 1961 (1962). The diagnostic value of trichobothria in pentatomid taxonomy. Verh. XI Internat. Kongr. Entomol. (Wien), 1: 35-37.